EXHIBIT 3

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OHIO
EASTERN DIVISION

IN RE: NATIONAL PRESCRIPTION OPIATE LITIGATION	)	
	)	MDL No. 2804
THIS DOCUMENT RELATES TO:	)	Case No. 17-md-2804
Track Three Cases	)	
Defendant.		

VIDEOTAPED DEPOSITION OF DAVID M. CUTLER
Conducted via Zoom
Boston, Massachusetts
Wednesday, June 2nd, 2021

REPORTED BY: GREG S. WEILAND, CSR, RMR, CRR
JOB NO.: 4621602

part of -- due to the misconduct of the defendants.

BY MR. WRIGHT:

Q. Do the additional factors that you're able to use for the county-level regression also make that a more reliable analysis?

MR. KO: Object to the form.

THE WITNESS: Again, I don't think -- I don't like the word "reliable" because I don't -- that's not an economic or a statistical word that I understand.

It is the case that I can control for more right-hand side variables in the county models. That is one reason why one would prefer county-level models. But, as I noted, there are other reasons why one would prefer state-level models, like, for example, one can look at all the areas of a state and not just the larger counties.

So it's not -- I do not look at this -- you know, if you ask me as a scholar, I think it's stronger when an individual scholar shows results that are true across different dimensions than when they look -- just look at only one. So if someone shows me that the

result is true at the county level and is true at the state level and is true using various controls and so on and so forth, then I say that package together gives me much more confidence in the results than if they had just shown me one specification.

BY MR. WRIGHT:

Q. In examining the relationship between shipments and mortality, you were just referring to taking into a number of -- or taking into consideration a number of other factors.

Do you agree that it is insufficient to opine that shipments caused mortality purely based on a correlation between an increase in shipments and an increase in mortality?

MR. KO: Object to the form.

THE WITNESS: I think what you're asking is if two variables are correlated, does that automatically mean that one causes the other. As a statistical matter, it is incorrect to say that if two variables are correlated one automatically causes the other.

So that -- so one of the things that I teach my students and that I myself practice in my research is that correlation does not imply

causality. What differentiates the analysis here are many, many things. Among them, the inclusion of controls for many different theories, other theories; the fact that those controls do not meaningfully influence the impact of the variable here, which is the shipments of opioids; the relationship between many different types of harms; the magnitude of the coefficient being reasonable in light of -- I'm not going to say theory but kind of previous work and discussion; the fact that the results are consistent with a theory that's been laid out; along with other results in the literature where people have also looked at this question and uniformly conclude, using a variety of different methodologies, that the shipments of opioids are related to the harms that have resulted from excess -- from the opioid epidemic.

So all of those things together tell a story of causality well beyond just what a correlation between two variables could say.

BY MR. WRIGHT:

Q. So you agree it's important to examine other potential causal factors rather than just two

things that correlate?

A. Any time that one observes a correlation between variables, if you want to tell a causal story, you have to look at the range of reasons why they might be correlated. And in this particular case, obviously I include controls for quite a number of different reasons why these may be correlated. That is a very, very important thing to do. That is what any reasonable scholar would do in looking at things.

And again, it's not just that. It's also that one looks at is there a theoretical relationship to believe it; if you look at other different variables, does one observe a relationship where you'd expect it and not where you wouldn't expect it; does the data comport with other results of the literature, what about people who have tried looking at it in other ways and with other types of variation.

So all of those together add up to a story of causation.

Q. All right. You've identified different phases of the opioid crisis, correct?

A. That's correct. I identify three phases of the opioid epidemic.

Q. And Phase 2 you've identified is when it became more widely recognized of the potential harms of opioids?

MR. KO: Object to the form, mischaracterizes the report.

THE WITNESS: Phase 2 I think of as not just greater awareness but also actions on the part of public and private sector agents, governments, health insurers, public policymakers, private actors and so on, to try to limit the harms associated with it.

So I don't think of Phase 2 as just a sort of awakening, now we have a problem, but I think of it as a series of actions that were taken.

BY MR. WRIGHT:

Q. But you would agree with the statement that from 2008 to 2012 harms from prescription opioids came to be more widely recognized?

MR. KO: Object to the form.

THE WITNESS: I believe that the harms became more widely recognized over the course of the 2000s, and the actions -- so they did become more widely recognized, and the actions also became much more common over that time

between shipments prior to 2010 and the change in mortality?

MR. KO: Object to the form.

THE WITNESS: Which -- so I want -- I just want to be a little bit specific here. So I do two of them. In Appendix Exhibit 9.4, I look at the change from 2009-'10 to 2018-'19; and then in Appendix Exhibit 9.5, I look at the change from 1993 to '95 to 2018-2019.

I think it would help, if you could, to ask the question about one or the other, although I could answer about both, but I think it would be helpful to talk about one or the other.

BY MR. WRIGHT:

Q. Let's focus on 9.4, the change from 2009-'10 to 2018-2019.

A. Okay.

Q. Is that a reasonable approach to examine the relationship between the shipments prior to 2010 and the change in mortality in 2018 to 2019?

A. Yes, the change from 2009 to 2010, yes, this is a reasonable way to examine the relationship between shipments '97 to 2010 and the change in mortality 2009-'10 to 2018-'19.

Q. And in your impact analysis, you rely on the indirect regression to model the change in mortality for the 2018 to 2019 period, correct?

MR. KO: Object to the form.

THE WITNESS: That is correct. I rely upon the indirect model for the period after 2010.

BY MR. WRIGHT:

Q. And why do you rely on the indirect model for that period rather than this direct regression analysis as reflected in Exhibit 9.4?

A. So first off, of course, one thing to note about Exhibit 9.4 is it shows a positive and very statistically significant and large relationship between shipments per capita per day and the change in the illicit mortality rate. So no conclusion about the nature of the results or about the substantive findings of the results would change independently -- excuse me, if one did that.

The reason why I prefer the indirect model there is because so many other things are going on in 29 -- between 2009-'10 and 2018-2019 that it's difficult to capture them all in a regression model.

So, for example, you have areas where heroin was white powder versus black tar, and that

will be different across the areas. You have areas where fentanyl supply lines were stronger and weaker.

And so unlike the earlier direct analysis where it's easier to identify all of the variables to include, here it's much more difficult to identify the variables that need to be included. And so, again, as we were talking about, because you can't include them all, you wind up having measurement error on some of the variables, and you wind up having sort of less -- you feel less, just less precision in the estimates.

And so whereas the indirect model is really capturing, it's -- the indirect model is really answering the question, you know, what happened economically and socially over this time period and, therefore, would one have -- what would one have expected the illicit mortality rate to be.

And so it's a kind of a less structural way of estimating it when you're not sure exactly how to specify all of the structure.

Q. The factors that you identified that make the analysis more difficult for this later time period, 2018 to 2019, your point is that you cannot account for those in the direct regression?

MR. KO: Object to the form.

THE WITNESS: It's much -- it's much more difficult to account for those in the direct regression. Not all of them are able to be readily measured even.

BY MR. WRIGHT:

Q. How do you account for them in the indirect regression?

A. What the indirect regression does is it says let me look at what I would have expected would have happened to illicit mortality.

So let me go back a second. One of the big issues is, of course, that as economic and social times get worse, people use drugs more. So that's a very common thing, and it's very, very clear in the data that in areas of the country, in time periods where things are getting worse, people will use drugs more.

Then what I then -- what the indirect model then says is, okay, what happened to those economic and social conditions, so can I explain any of the change in deaths due to illicit opioids from those economic and social conditions.

What the basic fact is is that from 2010 -- remember, 2010 is right about The Great

Recession. From 2010 through the end of the 2010s, 2018-'19, the economy got better, not by a ton but it got better, and social factors tended to get a little bit better. So what the indirect model says is if you think bad times raise drug deaths, which they do, and the economy gets better, you should have expected a reduction in deaths due to illegal drugs.

And so it's very clear I don't have to put a lot of assumptions on exactly everything going on. It just says tell me about those economic and social factors, what's going on with them and what they would predict, and it's clear that they would predict an improvement in the situation because the economy got better. And, of course, the actual data is that the mortality rate got worse. It rose enormously. And so that's a statement that -- that's just a very nonstructural statement that says there's no way you can explain this with something other than the fact that so many people were addicted to opioids because there's just nothing about the economic and the social structure that's going to tell you that opioid mortality rates should have soared.

Q. But the indirect regression does not have

That delta is reflected in Row M, correct?

A. That is correct. Row M is showing the difference between the actual and the predicted.

Q. And part of your methodology is to attribute that incremental change in mortality entirely to the shipments prior to 2010; is that correct?

MR. KO: Object to the form.

THE WITNESS: The shipments here are really a proxy for the addiction that's built up. So it's really attributing it to the stock of addicted people, which is a product of the shipments.

BY MR. WRIGHT:

Q. A product of the shipments prior to 2010?

A. That's correct.

Q. If there were no shipments prior to 2010, what would this -- how would that change this?

A. An area with no shipments, the easiest way that this would change it is that there would literally be no pills. So the second block of Exhibit 51 would be zero because there would be no pills.

And the -- there would be no -- defendants' percent of total MME would be zero

because they wouldn't have supplied any harmful pills. So that would have shown up in Row N as being zero. So we would get zero for the 2009-'10, zero for 2018-'19, and therefore zero over the entire time period.

Q. Is it correct that your methodology does not take into consideration any distribution or dispensing after 2010?

A. When I do the indirect analysis, most of that is on -- most of that is for deaths due to illegal opioids. The thing that we know is that legal opioids, of course, fell enormously in those areas. And the shift, as we spoke about in Exhibit -- was it Exhibit -- the shift that we spoke about was to illegal opioids.

So the -- once people are no longer really in those quantities receiving illegal opioids, there's a different dynamic at work. And, therefore, you wouldn't want to relate the deaths due to illegal opioids to the shipments of legal opioids after the crackdown on the shipping occurs.

Let me just make sure I find the correct figure to refer to.

MR. KO: I think you were referring to Exhibit 27.

THE WITNESS: Thank you, Mr. Ko.

I wanted the other one, not the heroin one. I wanted just the general picture of the --

MR. KO: That was the one that Jason showed you?

THE WITNESS: Yes, please.

BY MR. WRIGHT:

Q. I think you've --

A. Exhibit 11, thank you.

Q. We're sort of going on a tangent here. But let's break this down a little bit.

For the direct regression analysis that you do for the change in opioid mortality through the 2009 and 2010 period, shipments or dispensing after 2010 by the defendants are irrelevant to that analysis, correct?

MR. KO: Object to the form.

THE WITNESS: They're not relevant, that's correct. Ex post shipments would not be relevant to deaths up to that point.

BY MR. WRIGHT:

Q. And the indirect regression analysis that you utilize, shipments or dispensing are not a variable included in that analysis, correct?

A. The past shipments are in there, to the extent that they're related to the death rate in 2009-'10. So they're there implicitly because I'm starting from the 2009-'10 death rate due to illicit opioids, and then I'm forecasting that forward.

Q. But that doesn't consider any distribution or dispensing after 2010?

A. That's correct. The dispensing or distribution afterwards doesn't matter. I would have personally expected that it would be the opposite fact afterwards; that is, given past shipments, if you had more in the future, maybe you had less deaths. But it's not in there.

Q. And for Exhibit 51, when you go through Scenario 1, there's -- no part of this methodology is taking into consideration or depends upon the distribution or dispensing of the defendants after 2010?

MR. KO: Object to the form.

THE WITNESS: In my judgment, that's not relevant for this because at that point we're really looking at deaths due to illegal opioids, and the issue is the built-up demand for the illegal opioids, not the continuing smaller flow of the legal opioid prescriptions.

BY MR. WRIGHT:

Q. But to be clear, the distribution and dispensing after 2010 is not factored in any way and may not be considered, as you just indicated, for your methodology as reflected in Exhibit 51?

A. I believe that the appropriate methodology does not have that in that, that's correct.

Q. And that is true when you do the same analysis for McCann's Scenario 3, which is reflected in Exhibit 12.3 or Appendix Exhibit 12.3, correct?

A. That is correct. In Scenario 3, it's generally done in a similar fashion.

Q. Now going back to Row E, the predicted mortality as reflected in Exhibit 51, and as you've already stated, that would -- that result would only occur if there were no shipments of opioids into the Track 3 counties prior to 2010, correct?

A. I'm sorry, say that again.

Q. The figures in Row E for the predicted mortality, those figures would only be -- would occur if there were no shipments of opioids to the Track 3 counties prior to 2010?

A. No.

MR. KO: Object to the form.

THE WITNESS: No -- I'm sorry, that --

yes, that is correct. That is the -- let me just -- I just want to look at -- I just want to make sure I say it correctly, so give me just one moment to look through it.

That is correct. Row E, and I just wanted to confirm that in the report, Row E is the mortality expected in the absence of any shipments of prescription opioids.

BY MR. WRIGHT:

Q. And one way there would have been no shipments of opioids to the Track 3 counties is if the DEA had, for instance, prohibited any of the relevant opioids being shipped to those two counties?

MR. KO: Object to the form.

THE WITNESS: I don't want to agree to that because I'm not sure what authority the DEA has. Anything that would have led to no shipments of opioids would have led to that predicted mortality in the area.

BY MR. WRIGHT:

Q. So McCann only flags prescriptions and distribution from 2006 to 2010, correct?

A. That's correct. Dr. McCann looks at data from 2006 to 2010.